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Human gastric intrinsic factor expression is not restricted to parietal cells.

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Gastric parietal cells have been accepted as the only site of intrinsic factor production in the human stomach. In animals, however, intrinsic factor has b localised to various other cell types of foregut origin, including chief and enteroendocrine cells in gastric mucosa, and duct cells from salivary glands a pancreas. The availability of recombinant human intrinsic factor has led to production of high titre, monospecific antiserum which was used to reexamir the distribution and subcellular localisation of intrinsic factor in the human stomach. Immunolight microscopy revealed that most positively stained cells were gastric parietal cells, but at the margins of the anatomical regions (e.g. cardia/fundus, body/antrum) clusters of gastric chief cells and individual enteroendocrine cells were found to contain intrinsic factor. Immunoelectron microscopy demonstrated the highest antigen density on endocytic and apica membranes of parietal cells. Exocrine secretory granules of a subpopulation chief cells, the secretory granules of some enteroendocrine cells, and the plas membranes and smooth vesicles of endothelial cells of the lamina propria capillaries underlying enteroendocrine cells were also positive for the antiger Labelling in all cells was specific, as it was abolished by preabsorption of the antisera with purified recombinant human intrinsic factor. These findings demonstrate a potential for cellular expression of human intrinsic factor in nonparietal cells. Because such expression occurs normally at the margins of anatomical gastric regions, it suggests that local factors may influence expression of intrinsic factor.

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